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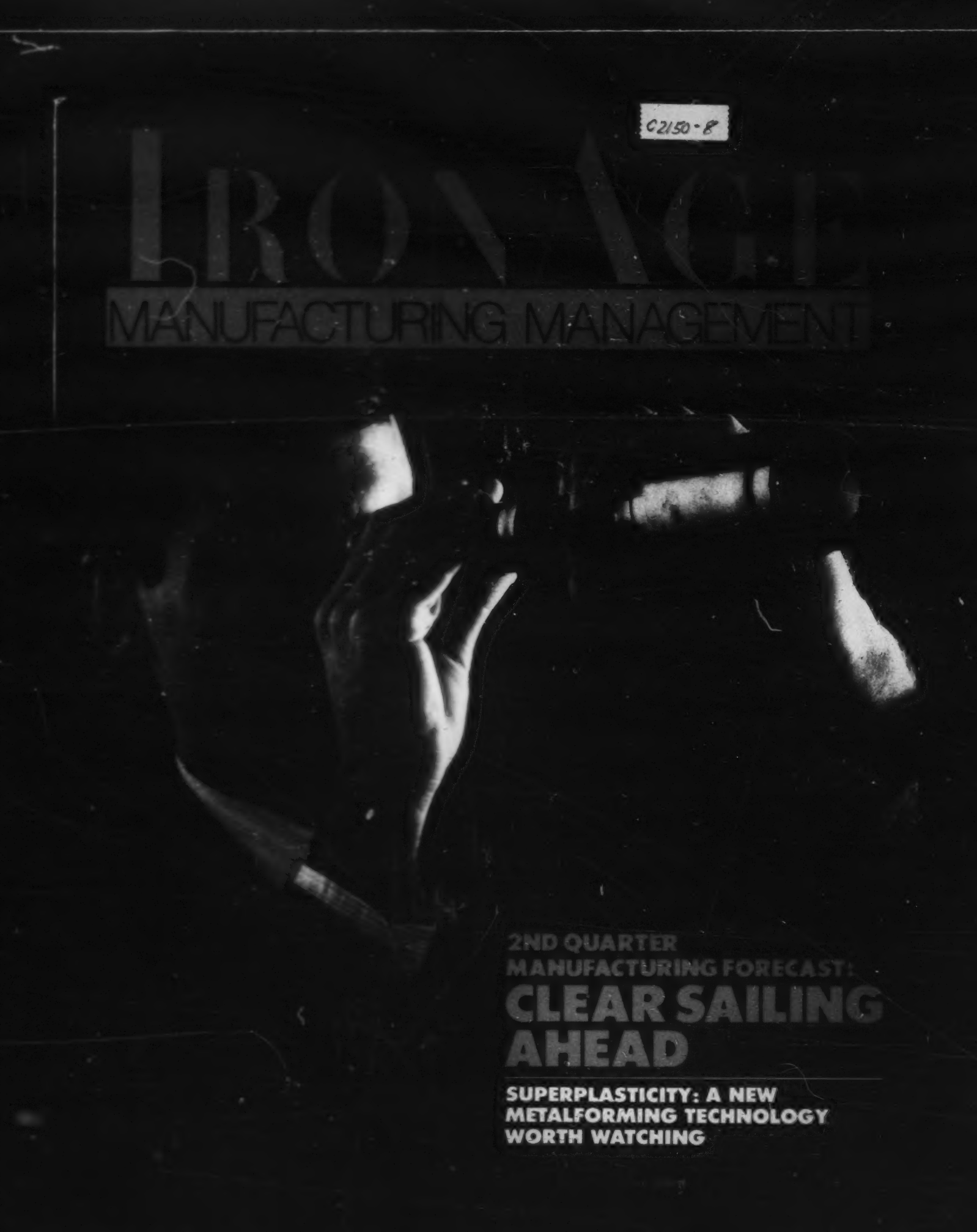

2ND QUARTER MANUFACTURING FORECAST:

CLEAR SAILING AHEAD

SUPERPLASTICITY: A NEW METALFORMING TECHNOLOGY WORTH WATCHING

APRIL 5 1985 VOL. 228, NO. 7

CHILTON'S
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MANUFACTURING MANAGEMENT

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IRON AGE (USPS 769-780) is published 24 times a year by CHILTON COMPANY, Chilton Way, Radnor, PA 19089. Chilton Co. is a division of American Broadcasting Companies, Inc., New York, N.Y. Second Class Postage Paid at Wayne, PA 19087 and additional mailing offices. IRON AGE is sent on a controlled free basis to qualified managers in U.S. metalworking companies. All others: Manufacturing Management edition—$42 one year, $61 Canada/Foreign (24 issues); Metalsproducer U.S. edition—$24 one year (12 issues); Metalsproducer International edition—$27 one year (6 issues). Single copies, $2.50. Cable Chilton Philadelphia.
Send address changes to IRON AGE, P.O. Box 1440, Riverton, N.J. 08077.

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MANUFACTURING FORECAST

CLEAR SAILING AHEAD

BY JOHN D. BAXTER

Business executives are confident of a solid first half, and only a few see a recession starting during the last half.

Don't worry about business recovery in 1985.

A continuance of the business expansion is in the bag for the first half of the year.

Beyond that, the rest of the year looks promising.

Those are the views that come from listening to many economists in recent weeks.

Said Albert T. Sommers, former chief economist of the Conference Board, "There is no business cycle out there in 1985." In other words, the business expansion of 1984 will roll on through this year.

Paul A. Volcker, chairman of the Federal Reserve Board went further. In mid-February, he told Congress he was more worried about fast economic growth this year than he was about the dangers of a recession.

Business executives, generally, seem less sanguine than economists about 1985 prospects. But at least two recent surveys indicate that business executives are confident of a solid first half, and only few see a recession starting during the last half.

Still, in the matter of pace of recovery, few, if any, economists and executives see economic growth this year matching the very strong showing of 1984.

For example, last year the U.S. economy, as measured by inflation-adjusted Gross National Product, grew by 6.8 pct. A range of recent forecasts of 8 top economists points to a growth rate this year of 3.5 pct to 4.5 pct.

Even Reagan Administration economists forecast a slower growth rate this year than last. They are betting on a 4 pct growth rate . And the traditionally conservative Congressional Budget Office has projected growth of 3.5 pct for this year.

Signals Are Green

So, for the first half this year—if the seers are on target—the economic setting in which U.S. metalworking industries will be operating looks to be a healthy one. Incoming orders should continue to climb—at least, for most durable goods manufacturers. Factory operating rates should edge upward further.

The icing on this 1985 cake is an almost certain continuance of low inflation rates, and interest rates that seem destined to move up only moderately, if at all. Prices have held in line now for two full years, and no excesses can be seen emerging in the near-term economy that might change things

Held-in-check prices, in turn, can be expected to hold a rein on interest rates. Michael E. Levy, a Conference Board economist thinks a dip in interest rates could be in the offing this year. This is possible, he says, because of "improved inflationary expectations" that are modifying historical patterns of rising rates in the third year of economic recovery. Too, interest rates are already at near record-high levels in relation to overall inflation rates.

Beyond well-contained prices and interest rates, why is there so much confidence about the first half this year?

For one, there is the matter of sheer momentum. The 1984 GNP growth of 6.9 pct was the strongest scored in 34 years.

And, secondly, with prices and interest rates behaving well, and the Fed in a benevolent mood, no block is now seen just ahead on the fast-growth track.

If there is any hard-to-get down ingredients in the first half 1985 'piece of cake,' they are in slowing gains in corporate profits and in continued severe import competition.

Profits will be up but not likely anywhere near the 15 pct growth rate clip of last year. Earnings growth will be slowed because the price relief path will be largely shut off to durable goods producers. The low inflation rate and continued strong inflow of imports will combine to rein in corporate earnings.

Price pressures, of course, were on the scene last year. But, at that time, these pressures didn't hold back corporate profits because manufacturers, for the second straight year, worked down their breakeven points to rock-bottom levels. In other words, corporate costs came down more steeply than prices—and the payoff came in fatter profits.

But...there is little room left this year for corporations to get their breakeven points down any further. This means the hold-the-price environment this year will take a toll on bottom lines.

The Import Scourge

Imports, of course, will remain a scourge this year. They hit not only directly on U.S. industry bottom lines, but on corporate revenues and market shares. Last year, the U.S. trade **deficit** in manufactured goods hit a staggering record total of $88.5 billion, up from $38.2 billion in 1983.

Hopefully, however, import pressures this year may be less severe than last year. This is because the U.S. is expected to experie e an economic growth rate more in line with other industrial nations. In 1984, U.S. growth ran well ahead of that of most other nations. This made the U.S. ripe for imports of all kinds. When foreign manufacturers couldn't sell at home in the face of their own sluggish economies, they turned eagerly to big bustling U.S. markets.

So, if the U.S. economic growth rate does slow down this year as widely predicted, it could have an ameliorating effect on import competition. Foreign manufacturers will have faster-growing domestic market needs to fill and the U.S. market won't be the only game in town.

Will the Dollar Fall?

Another factor that points to lessened import pressures this year is the possibility that there will be some kind of soft landing for the soaring value of the U.S. dollar. Most economists, it seems, feel the dollar simply has to crack a bit. They feel it is too far out of line with just about all other currency values of the world. The dollar has soared to a level 76 pct higher than in July 1980 as measured against a broad mix of major foreign currencies.

This widely-held belief in an imminent easing of the dollar's strength has taken on fresh credence in light of world economic growth rates getting into better alignment. Too, U.S. interest rates have lately been less out of line with foreign rates. This trend trims world demand for U.S. interest-bearing securities and thus tends to sap some of the dollar's strength.

Still, there seems to be wide agreement that the 'demon dollar' will continue as a threat to continued U.S. business growth until, or unless, steps are taken to bring the Federal budget deficit under control.

However, that dark-cloud threat hangs mostly over 1986; very little of it threatens stormy problems for this year. That means sunny skies are almost certain to continue through at least the first half of 1985.

If a tax bill shapes up quickly as part of the Washington effort to get the budget under control, then there could be an impact on business this year. This would be true if the Treasury's proposed corporate tax disincentives look as though they might shape up as a Congressional bill. Business might be discouraged enough to pull in its oars in 1985—even though the tax bill might be set for 1986 implementation. □

STEEL

What's the breakeven point of steel industry?

For producers of steel sheet in the first quarter, it was probably over 100 pct of capacity. Demand was strong enough for sheet mills to use most of the capacity they cared to activate. Nevertheless, large losses were reported by LTV, Bethlehem Steel and National Steel Corps.

National's loss pinpointed the industry's trouble. National makes sheet almost exclusively. Sheet products accounted for most of the rise of more than 1 million tons in steel shipments in the first quarter.

National was profitable in the fourth quarter of 1984 and in the full year. Yet, the company lost money on added volume in the first quarter of 1984. The explanation of the red ink was that steel prices went to pot. There was some deterioration in the fourth quarter of 1984 when demand lagged. Prices slipped another notch in the first quarter.

As to why this happened, there's no question competition in the domestic industry was an immediate cause. At least two large mills reportedly set out to expand their market shares. According to domestic producers, however, the ultimate cause of price weakness was the continued heavy flow of foreign steel.

Under the voluntary restraint program of the Reagan Administration, steel imports are supposed to be reduced by from 5 million to 6 million tons in 1985. The reduction was actually supposed to start last October. That didn't happen. Imports were heavier than ever in the fourth quarter and there was a further jump in January.

If there is no sign of foreign restraint in the next week or two, domestic producers will begin renewing their agitation for legislated quotas and prompt enforcement of the unfair trade laws.

Time is of the essence for steel companies. By March, people were starting to talk about the next recession. This was being predicted for 1986 by some economists. For the snake-bitten steel industry, it would be par for the course if the import restraints started working just when there was no market left to protect.

Time was also running out in another sense. The steel industry as a whole has lost money for the last three years. The aggregate three-year deficit was probably around $7 billion. Another display of red ink was indicated for the first quarter of 1985. Bethlehem said it could lose as much as $80 million in the quarter. LTV said its deficit would be worse than expected.

The profit drought can't continue indefinitely without producing some dropouts. People have been warning of steel bankruptcies for the past three years. There have been two failures, but the largest companies have managed to hang on.

Now, the day of reckoning may have arrived. In March, Wheeling-Pittsburgh Steel Corp. was negotiating with lenders and United Steelworkers of America (USWA) in an effort to defer obligations.

Bethlehem Steel was seeking an infusion of equity capacity through the sale of 5 million shares of common stock. The company was asking shareholders to authorize a larger increase in the number of common shares outstanding.

Sharon Steel Corp. plans to sell some assets to meet a $23 million interest payment due March 1.

What made these developments so ominous is that only a limited amount of price relief is expected in coming months. Steel men are hoping demand will improve enough to end the extreme discounting of recent weeks, but few expect a sustained upward movement of prices.

Steel men are hoping demand will improve enough to end the extreme discounting.

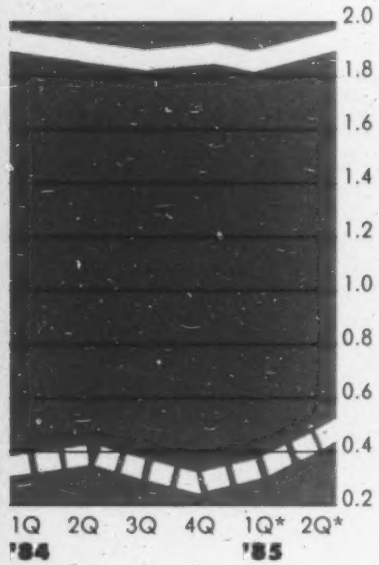
Steel Shipments
In Millions of Tons

Source: AISI
*IA estimate

NONFERROUS

(Declining) inventories at the producer and hedge market levels could help firm up second quarter pricing.

Nonferrous Metals Shipments
In Millions of Short Tons



Source: American Bureau of Metal Statistics, Aluminum Assn.
*IA estimate

Industrial consumption of basic nonferrous metals was running at a good clip in the first quarter, but the metals producers are having trouble translating this into better prices.

The high-flying dollar and attendant imports of lower-priced foreign supplies are the main impediment, but the underlying limiting factor remains the ready availability of base metals and conservative buying policies in the manufacturing sector. Inventories at the producer and hedge market levels continue to decline by varying degrees, depending on the metal, and this could help firm up second quarter pricing.

Copper prices firmed in the opening weeks of the first quarter, but faltered again in February despite continued improvement in market fundamentals. Early March values didn't exactly roar in like a lion, but growing talk of tighter supplies as 1985 wears on, combined with continued improvement in consumption, was expected to provide the groundwork for another attempt at price recovery.

The capital goods sector, which accounts for about 55 pct of copper demand, appears to be in the early stages of an up-cycle as capital appropriations are translated into firm orders. There also are possibilities of production losses in South America and elsewhere for reasons ranging from neglected maintenance to the socio-political problems.

The nickel industry, which depends on the capital goods sector for about 60 pct of its output, also seems to have a better hold on the inventory situation. London Metal Exchange (LME) stocks fell substantially last year and were still zig-zagging lower in the first quarter of 1985. Nickel production was held closer to market requirements in 1984 and the trend continues.

LME nickel prices fluctuated erratically in the first quarter, reflecting in large part the foreign exchange situation, but the overall upward trend, in both dollar and pound sterling prices, reflected the changed inventory situation and improvement in consumption.

The capital goods sector accounts for only 25 pct of aluminum demand, putting it only a point or two ahead of the aluminum beverage can market alone, but improvement in this area will help to pick up some developing slack elsewhere.

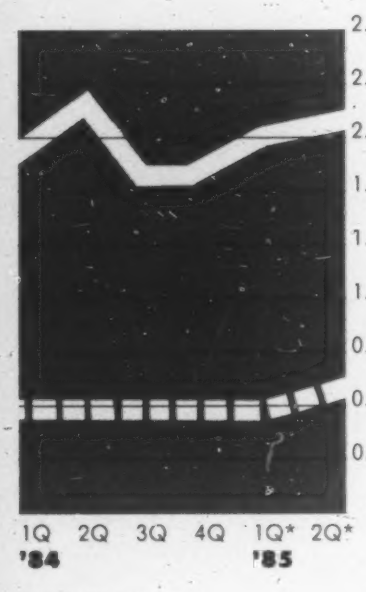
Aluminum industry incoming order rates half-way through the first quarter were running about 10 pct under year-earlier rates. Although the order rate in the early 1984 period included some double-booking against possibilities of price hikes, the pace in the 1985 period nonetheless was disappointing. Can stock orders were down 13-14 pct through mid-February. An industry-wide price freeze on can stock was due to expire March 31.

Ingot prices remained weak as the first quarter drew to a close despite sizable production cuts put into effect or scheduled. Further cutbacks were expected before midyear. Free world primary aluminum output jumped 15 pct last year from depressed 1983 levels. Most of the production cutbacks were made by U.S. producers, who accounted for most of the gains in 1984, but production has continued upward in Australia/New Zealand and Latin America. Aluminum ingot prices should improve as output curbs reduce metal available for delivery to the hedge markets. This should provide direct and psychological support for recovery in mill product prices as well. One of the keys, on the U.S. market at least, is how firm the capital goods sector develops in coming months and how long the automotive market holds up.

AUTOMOTIVE

The big question mark in the second quarter and in the years ahead is how many cars the Japanese will sell here.

Automotive, Sales
In Millions of Units



Source: Motor Vehicle Manufacturers Assn.
*IA estimate

U.S. automakers expect to sell 2.2 million cars in the second quarter, up slightly from the estimated 2.1 million sales in the first quarter.

The big question mark in the second quarter and in the years ahead is how many cars the Japanese will sell here. The voluntary restraint agreement (VRA), under which the Japanese limited imports to 1.9 million units per year, ended March 31.

Most automakers and analysts expect Japanese sales here to increase by 300,000-400,000 units in 1985, to a total of 2.2-2.3 million.

The Japanese likely will sell another 75,000-100,000 units here in the second quarter, raising total import sales in the second quarter to about 700,000 units. Imports could increase by about another 75,000 units with each new quarter, raising total import sales in 1985 to 2.8 million units. That includes 500,000 imports from Europe.

Those are conservative estimates. The Japanese say that capacity constraints will limit their increase in exports to the U.S. to 600,000 more units from March 31, 1985 to March 31, 1986. Chrysler foresees an increase of 650,000 Japanese exports in the same period. U.S. Special Trade Representative William Brock estimated 750,000 more units will be shipped from Japan.

Imports, which captured 23 pct of the U.S. market in the first quarter, "will rise to 29 pct by the fourth quarter and 40 pct in three years," said the sales analyst for one U.S. automaker. "In ten years, 50 pct of the U.S. market could consist of Japanese imports, Japanese cars built in the U.S., and cars built by U.S./Japanese joint ventures with a 50/50 U.S./Japanese content. In addition, ...10 pct of the parts used in domestic U.S. cars will be from Japan."

The U.S. automakers want to profit from the increase in imports. Chrysler, which opposed the ending of the VRA, has announced plans to import 200,000 more small cars per year from Mitsubishi. Chrysler already imports 87,500 units from Mitsubishi, its Japanese affiliate.

General Motors, which favored the end of the VRA, wants to increase shipments from its Japanese affiliates, Isuzu and Suzuki, from the 50,000 units to 200,000 units.

Mitsubishi, Isuzu, Suzuki, and Mazda are the Japanese automakers most likely to increase exports to the U.S., since the VRA severely constrained their exports to the U.S.

Toyota, Nissan and Honda, on the other hand, possibly will show more restraint. Under VRA, Japan's Ministry of International Trade and Industry gave Japan's Big 3 the largest share of the U.S. export market.

In announcing his decision to end the VRA, President Reagan stated his belief "in the wisdom of maintaining the principle of free and fair trade for the benefit of the world's consumers." In testimony before a House subcommittee, GM's chief economist stated the same: "Removal of the restraints," said GM's Dr. Marina Whitman, "will serve the interests of individual consumers and our nation's economy." Chrysler and the United Autoworkers, on the other hand, forecast the loss of thousands of jobs in the U.S.

By the fourth quarter, the increase in Japanese shipments could mean good deals on the imports for U.S. consumers. Automakers expect overall consumer confidence to remain high and the prime interest rate to rise by no more than 1 pct during the year.

The automakers also expect fuel prices to continue to hover between $1 and $1.25 per gallon. That will ensure demand for larger cars, which in turn will ensure continued profits for Detroit in the near term.

MACHINE TOOLS; FLUID POWER

MACHINE TOOLS—A bundle of mysteries is the way one machine tool builder described the outlook for the next several months.

Those mysteries include the fate of industry's Section 232 trade petition's, the effect a possible surge of Japanese auto imports might have on domestic automotive capital spending, and the trend of the rest of the U.S. economy over the next several months.

Many in the industry are predicting a shakeout over the next few years as foreign competition, in stand-alones particularly, becomes worse from a price standpoint

"There's no future for a single machine company," said one builder. "The numbers are too far apart."

Still, there are some optimists in this area of machine tool industry. "If we had a more realistic dollar abroad and if the yen were truly reflective of the Japanese economy, we might be able to predict a good future for single machine producers in the U.S.," said one industry analyst.

Also causing the industry some worry is the end of official restrictions on Japanese cars. "It's obviously premature to discuss, but I will say I don't see how it can help us," said one lathe maker. "I don't believe the Japanese have any intention of self-control in this area."

As far as the economy in general, however, a few major systems companies are more optimistic than they have been in years. "We see steady growth in all of our markets throughout the decade and beyond. The equipment we're producing is just too productive to ignore," said one company vice president.

The first quarter in domestic machine tool sales showed a continuation of the upward trend set in early 1984. Most expect that trend to continue steadily up as the industry enters the second quarter of 1985.

FLUID POWER—The $5.9 billion fluid power industry should advance in the second quarter, after a good showing in the first quarter of 1985. But despite the strength that many companies enjoyed even in the second half of 1984, there is a lot of caution about the year ahead.

The *Iron Age* forecast for the first and second quarters is up about 17 pct in the first quarter of 1985, over the closing quarter of 1984, and up 5 pct in the second quarter over the first quarter of 1985.

Data from the National Fluid Power Association, for example, showed a remarkable 35 pct gain in January 1985 hydraulic orders over December, and a moderate gain in pneumatics orders of about 12 pct. Combined gains for the total association membership were up about 26 pct, January over December 1984.

Company reports vary widely, because of the wide range of markets they serve. But an executive of Milwaukee Cylinder, part of Versa Tek, said he saw 1985 up about 5 pct (which coincided with the *Iron Age* forecast for the year, and he expected the second quarter to show about a 5 pct gain; which also reflected the *Iron Age* forecast (see chart).

But Milwaukee Cylinder had a strong fourth quarter, after gains late in the third quarter, which was not a typical late 1984 performance.

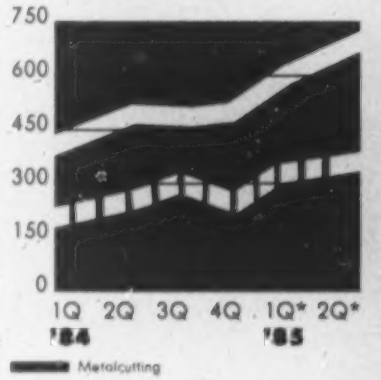
There are other exceptions, that point up the difficulty of getting a full picture of the fluid power industry.

For 1985's second quarter: a mixed but stronger forecast over the first quarter.

But for the total picture for 1985, there is somewhat less optimism than earlier projections despite an upward revision of NFPA's 1984 sales totals to $5.9 billion from earlier reports of about $5.5 billion for the year.

The first quarter in domestic machine tool sales continued the upward trend of 1984.

Machine Tools
Net New Orders
In Millions of Dollars



Source: National Machine Tool Builders Assn.
*IA estimate

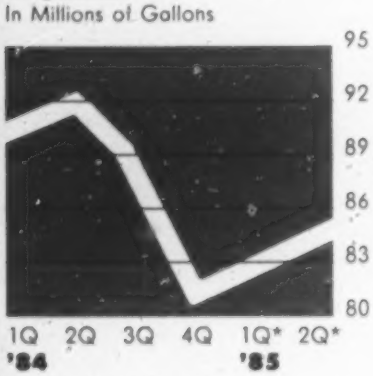
Fluid Power, Shipments
In Billions of Dollars

Source: U.S. Department of Commerce and NFPA
*IA estimate

COATINGS; PLASTICS

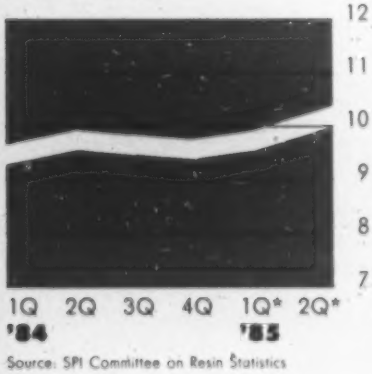
The outlook for coatings is for a slow '85 with shipments down 8 pct and inventories that are still too high.

Industrial Coatings Shipments
In Millions of Gallons



Source: U.S. Department of Commerce
*IA estimate

Plastic Resins Sales & Captive Use
In Billions of Lbs



Source: SPI Committee on Resin Statistics as compiled by Ernest & Whinney
*IA estimate

COATINGS—Industrial-coating companies expect to ship 85 million gallons of coatings in the second quarter. That's 8 pct fewer gallons than in the second quarter of 1984, which was one of the industry's best years ever.

The industry shipped about 83 million gallons in first quarter '85. That also was fewer than last year's shipments of 90 million gallons.

The problem is an excess of inventory from last year, particularly in metal buildings. Hardest-hit has been the aluminum-building market, down 20 pct from last year's first quarter.

"There was a tremendous inventory of housing built in the second half of 1984," said the vice president of one major Midwestern coatings firm. "Now the aluminum-building market is in chaos. Customers are dropping out left and right."

Total orders for coil coaters could drop off 15 pct from last year's second quarter. Much of that drop is due to the decline of the metal-building market, coil coaters' second largest source of sales after autos.

One major development is the decision of Roll Coater (Greenfield, Ind.) to stop coating the heavy-gage hot-rolled steel used in purlin.

Purlin requires gages of .054-.111 inch. Splicing coils of the heaviest sheet created gages of 1/4 inch, which excessively battered Roll Coater's multipurpose line. Hannah Steel (Birmingham, Ala.), Metal Prep (Houston), and Enamel Plating and Products (Portage, Ind.) can handle the purlin, but Roll Coater's decision eliminates a major buyer for coil coaters. It will continue to coat aluminum roofing and siding material, however.

"If April is as slow as the first part of this year," said one coating executive, "I think 1985 will be a pretty slow year."

PLASTICS—As expected, the first quarter for the plastics industry was fairly good and a 10 billion lb quarter of plastic resins in sales and captive use seems within grasp.

Business was up about 3 pct from both the fourth quarter and the first quarter of 1984. A slight increase, just under 2 pct, is predicted for the second quarter.

Last year was a 39 billion lb year for plastics. This year should pass the 40 billion lb mark with ease.

Among the more active thermosetting plastics, the materials that are becoming more popular are the epoxies and the polyesters, up 18 and 15 pct, respectively. Phenolics, on the other hand, are showing hardly any increase in sales.

Over on the thermoplastics side, the polyvinyl chlorides and polypropylene are both up, by 9 and 8 pct, respectively. And, the polyethylenes are up by about 4 pct.

If all goes according to schedule, 1985 should have several quarters surpassing the 10 billion lb barrier. For the most part, everything depends on the health of housing, packaging, appliances and automobiles.

The domestic plastics industry is still one of the very few U.S. industries enjoying a favorable balance of trade. Imports are sneaking up, however. It would appear that the balance will swing the other way before too long.

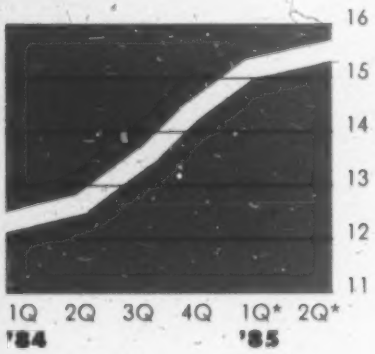
One major breakthrough, in terms of new applications, is the use of sheet molding compounds on the Cadillac Seventy-Five limosine's hood and rear doors.

In the aircraft industry the major breakthrough is the huge wing box on the Lockheed Hercules C-130 air transport which will be made from a graphite-epoxy composite. Both applications are competitive with steel and aluminum.

COMPUTERS; INSTRUMENTS & CONTROLS

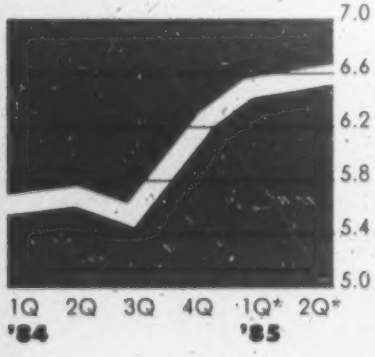
Computers seem to be immune to the business cycle, with runaway growth and few signs of any slowing down seen.

Computers Shipments
In Billions of Dollars



Source: U.S. Department of Commerce
*IA estimate

Instruments & Controls Shipments
In Billions of Dollars



Source: U.S. Department of Commerce
*IA estimate

COMPUTERS—Until a few months ago, little growth was projected for the economy in 1985. Based on this projection, experts expected a falloff in growth in the computer industry from its 20 pct growth rate in 1984 to a rate of 17 pct this year.

However, due to the unexpected strength in the economy, and in capital spending in particular, that decline has not occurred. Through the first two quarters of 1985, the computer industry's growth appears as strong as last year.

Despite the high cost of the U.S. dollar overseas, computer exports are mounting. The Commerce Dept. expects exports to rise this year at a rate approaching 30 pct. Many countries, especially those in Europe, are emerging from recessions and purchasing computers. However, the new wave of exports is small compared to the flood of imports coming into the U.S.

Reportedly, this year the U.S. trade surplus could decline from $5 billion to $2 billion. Last year the U.S. had positive trade balances with all parts of the world with the exception of the Far East, where that trade balance slipped to a negative $2.5 billion. This figure could become much worse by year end. Much of the deficit is due to the growing reliance of U.S. computer manufacturers and customers on parts, assemblies and peripherals from Asian countries.

Computers for business, manufacturing and design continue to sell very well. However, there are signs that personal computer sales growth is slipping. Growth rates could drop to 15 pct by year end.

Very little seems able to derail the computer industry's runaway growth. Going into the second quarter of 1985, few signs point to a significant slowing of this growth.

INSTRUMENTS—Judging from the enthusiasm being generated by the introduction of computer-based systems for controlling processes and whole plants, it appears that the instrument and controls segment of the U.S. economy is strong and getting stronger.

Where industry analysts predicted a 3 pct annual growth of shipments, in constant dollars, some growth rates at the first months of 1985 are higher, between 6—7 pct.

Instruments and controls are used in industries that cover the broad spectrum of activities, services and products. Competitive forces are at play. Exports of instruments and controls have been slowed by the high value of the U.S. dollar. By the same token, imports of instruments and controls has increased, particularly during 1984, with Japan and Europe as the major suppliers, a trend that is seen as declining as the trend toward integrating computer technologies with instrumentation and sensor development increases.

The growing sophistication of programmable controllers, for example, has narrowed the gap between programmable controllers and numerical control to the point where major firms are restructuring by combining the previously separate engineering, manufacturing and marketing operations.

With the general economy of the U.S. reporting better-than-anticipated results during the opening months of the year, there seems to be little reason to question the enthusiasm of one leading supplier to the process control field that identified the 1985 automation market for manufacturing to be $25 billion and projected that to grow to about $100 billion in the next decade, for a compound annual growth rate of about 15 pct!

TUBULAR GOODS; MINING EQUIPMENT

TUBULAR GOODS—The upward trend in shipments of oil country tubular goods that became apparent late in 1984 is expected to ease somewhat in the second quarter of 1985. The excess inventory situation that plagued the industry most of last year is evaporating; however, the total footage of oil and gas wells drilled in the U.S. also has risen over last year and is a factor.

There is uncertainty over the price of crude oil and what impact lower prices will have on drilling activity. This is expected to continue through the second quarter.

"A test of oil prices should come in March or April," one industry official explained. "If the price holds at current levels or increases, we expect a much stronger second half. But if it drops, it could have a strong adverse effect on the industry."

Rig count drilling figures are running below 1984 levels, which is helping slow recovery in the OCTG industry. In part, the decline is seasonal and is expected to reverse by the end of the second quarter.

"But the uncertainty surrounding oil prices and the concern about the Administration's flat tax rate plan also is taking its toll," another industry official explained.

Despite the mixed news, domestic OCTG producers that have continuously lost market share should begin to see some benefit in the second quarter from agreed-upon quotas from offshore producers.

But it is unclear if this will compensate fully for decreased domestic drilling activities.

Some industry officials already have lowered projected average rig count figures eight to 10 pct below earlier projections. Further declines in projections can be expected if oil prices drop further. All of this activity combines to present an uncertain second quarter for OCTG producers.

MINING EQUIPMENT—Mining equipment makers reported a small but gratifying increase in activity in one market and "more of the same" in another market.

The "gratifying increase" comes from the coal mining industry. The "more of the same" is the iron ore industry, which is still in the throes of its worst and longest lasting slump in 50 years.

Mining equipment makers have reported practically no activity at all in iron mining machinery for the past three years and the first quarter of 1985. And they expect nothing but "more of the same" for the forseeable future.

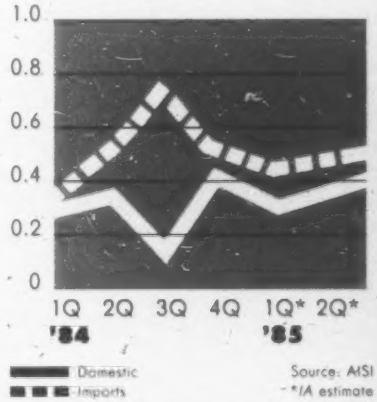
In fact, even a major resurgence in domestic steel activity would not remedy the situation, analysts noted. First, ore capacity is already more than adequate for meeting a 100 pct capacity level in presently existing domestic steel plants. Second, new, high-grade and "inexpensive" ore from Brazil threatens to enter the Midwest "any time a steel company cares to contract for it," as one industry observer said.

Coal mining companies, however, have reported some signs implying a steady upward trend in coal usage. "That, of course, translates into good business news for us," noted one coal processing equipment manufacturer. "We expect the second quarter of this year to be a good 20 pct better for us than last year's and the year itself perhaps better than 1984 by an even higher percentage. That's coming out of a very low period though," he added.

Simply put, the economy's general improvement has coal mining equipment producers more optimistic than they've been in the past few years. A further source of optimism comes from the major utilities. None of them is planning any major new nuclear plants.

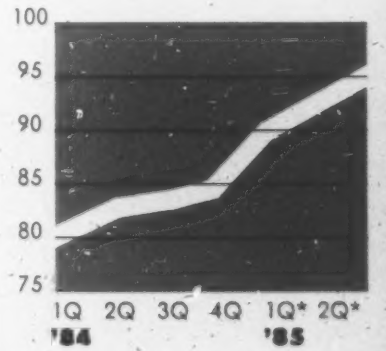
Domestic OCTG producers... should begin to see some benefit the quotas.

Tubular Goods Shipments
In Millions of Net Tons



Source: AISI
*IA estimate

Mining Equipment Sales
In Millions of Dollars

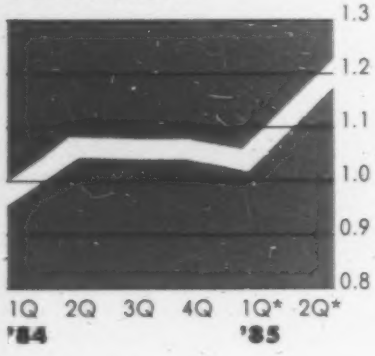


Total U.S. and export figures; includes continuous miners, mobile loading machines, shuttle cars and cutting machines. Source: Mining equipment manufacturers
*IA estimate

CONSTRUCTION; FARM EQUIPMENT

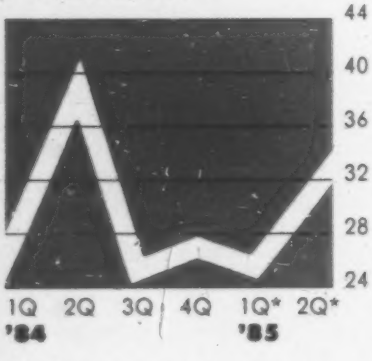
Traditionally, the second quarter is the strongest of the construction machinery year, but this year it will be poor.

Construction Equipment Shipments
In Billions of Dollars



Source: U.S. Department of Commerce
*IA estimate

Farm Equipment Wheeled Tractor Sales
In Thousands of Units



Source: Farm & Industrial Equipment Institute
*IA estimate

CONSTRUCTION—Despite very conservative forecasts from construction machinery builders for 1985, *Iron Age* estimates that second quarter construction machinery unit sales could go up over 15 pct over the first quarter. U.S. producers have been predicting only about a 10 pct gain.

Strong retail sales have helped reduce field inventories and some dealers began adding inventory in the first quarter of 1985.

Traditionally, the second quarter is the strongest quarter of the construction machinery year from the standpoint of producer shipments, as dealers build for their biggest shipment season in the second and third quarters. The fourth quarter slows again seasonally, though it can be helped by tax-related sales at the end of the quarter.

Second quarter real volume will hinge on two critical factors. First is the impact of imports. In its annual forecast, *Iron Age* reported that foreign producers have forecast some strong gains for 1985.

Second is the nation's highway construction program. Without additional funding, the highway program could falter as early as second quarter. Highway spending was a strong factor in the beginning of the 1984 recovery, when construction equipment shipments advanced about 30 pct. Part of the 1984 money is still tied up and if these carryover funds are authorized for expenditure that would help 1985 shipments, possibly by $1.5 billion dollars, according to one estimate.

The rise in equipment builder orders to their component suppliers has matched gains in sales of equipment reported by some builders in mid-January. Combine that with lower dealer field inventories and prospects for the second quarter begin to look brighter.

FARM EQUIPMENT—Farm equipment continues to show one of the weaker 1985 performances in the capital goods sectors. First quarter sales of tractors, the industry's bellwether, were under the year ago figure and off in December from the previous month. December sales are helped by tax buying and this historically has lifted that month over the preceding month.

A mild flurry of components buying by some companies in January stirred hopes that farm equipment might make a belated pickup, but it now appears this was more related to the construction machinery or light industrial equipment lines of these companies. At the same time, comment by Deere & Co., the biggest U.S. farm machine builder, that it would cut 1985 production levels about 5 pct, exploded any hopes of a significant recovery during 1985.

The second quarter is seasonally a gainer, but after the lackluster first quarter, even the second quarter likely will be a poor performer.

Combines, the other big ticket item after tractors, are equally in trouble. Sales are reported to be off 31 pct from January 1984, but some pull-behind equipment seems to be in relatively better shape. In late 1984, *Iron Age* noted that "Short line" builders of farm machinery were faring better than the big machinery makers. Still, a survey of 400 members of the Farm Equipment Manufacturers Association showed that they were operating at only 50 pct of capacity.

At the moment, there is no reason to expect any change in these negative signs although there should be a moderate seasonal gain in second quarter sales by distributors. It probably won't translate into an equivalent gain in the manufacturing rate at the equipment makers' plants.

APPLIANCES; MATERIAL HANDLING

APPLIANCES—The major appliance industry outlook continues to be positive for the immediate future, but not across the board for all major appliances. The number of housing starts, which were the highest in five years during 1984 at 1.74 million housing units, will slightly trail behind during 1985 despite lower interest rates.

According to industry figures, 1984 U.S. shipments of major home appliances exceeded 39.4 million units, which surpassed the record 35.8 million units set in 1973.

The U.S. continues to be the world's largest single national market for appliances, with shipments at record levels. Some predictions for 1985 indicate that U.S. shipments may reach 39.8 million units, the result of a strong impetus from home modernization programs.

Microwave ovens proved to be the popular appliance, with more than one-fifth of the total 1984 shipments. More than eight million microwave ovens were sold, surpassing the unit sales number for gas and electric cookers for the first time.

The world microwave oven market in 1984 was an estimated 12.5 million units, up 36 pct over 1983. And, the world market is far from being saturated.

Total sales of all microwave ovens in Western Europe in 1984 were 1.6 million units, up 60 pct from the 950,000 units sold in 1983. While most of the microwave ovens sold in Europe were imported, production is expected to increase sharply as international companies step up production capacity and add more manufacturing plants to serve the Great Britain, West Germany, France and other European markets.

The second most-popular appliance sold in the U.S. during 1984 was the food disposer, with a record four million units sold.

MATERIAL HANDLING—Material handling equipment manufacturers are more optimistic than most other manufacturers these days simply because, so far, the "Asian Invasion" hasn't found them, industry analysts pointed out.

"We are seeing a significant increase in inquiries and a significant increase in orders over just a few weeks ago," reported one crane manufacturer. "People are getting their confidence back about the future," he added.

All segments of the material handling business noted increases in both orders and inquiries, from industrial trucks to AS/R systems. The industrial trucks segment, however, has "restructured" due to competition from Western Pacific nations. A large share of those bought by U.S. manufacturers from now on will be from Japan and Korea.

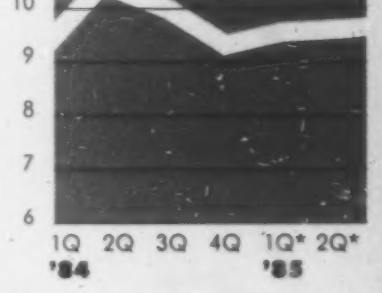
Other segments of the material handling industry, particularly large warehousing stacker crane systems, seem destined to remain domestically produced. This is because of the "custom" nature of such systems.

"We expect the year to be our best in several," noted one systems company president. "The first quarter is already turning out to be our best in years and I think, barring a major disaster like a return to high inflation, we'll rack up a terrific 1985. In fact, I really believe we're entering a long period, perhaps the rest of the decade, of steady and good growth," he said.

Others in the industry reported similar great expectations. "What we offer now is so much more effective and faster than what it is designed to replace, that the market will just have to buy it," said one systems company executive. "We expect the awareness of that fact to spread in the market throughout the year," he predicted.

The appliance industry outlook remains positive for the immediate future.

Appliances, Shipments
In Millions of Units



Source: Assn. of Home Appliance Manufacturers
*IA estimate

Material Handling Shipments
In Billions of Dollars

Source: Material Handling Institute
*IA estimate

CASTINGS; FORGINGS

CASTING—The foundry industry was expected to gain only about 2 pct in total 1985 shipments, pegged largely on a good movement of castings to the auto and appliance industries, and hampered by slow demand from its customers in the farm machinery and construction machinery markets.

Second quarter should be the strongest quarter of this year, and looks like it will be up. But on the basis of reports up to this point, the projected 2 pct gain may be overly hopeful. Even first quarter is not showing the gain over the year ago that it should be to bring the year in ahead of 1984.

The year began mixed. Where some auto suppliers were running almost full out, foundries with a strong capital goods customer list were often running at only 50 pct of capacity.

The positive sign in the capital goods group was that the backlogs of orders were inching up a little through February.

That still leaves the ferrous foundry group pinched between a fairly low scrap supply, and customer demand for very short delivery times on castings. Pressure is also increased on delivery times by the heavy demand for auto parts and six cylinder engines, where several auto products are delayed on delivery by engine needs.

All these conflicting trends have made forecasting difficult for foundry managers. Some were running up to 10 pct ahead of the fourth quarter of 1984, in first quarter of 1985. These were strongly oriented to customer goods-related castings, like auto and appliance. But others were running 5 pct under fourth quarter (which, incidentally, was probably the lowest quarter of 1984) in a period when the industry traditionally has rebounded by an average 7 pct.

FORGINGS—For the first few months of 1985, business for forging companies is up, but profits remain in the dumps. "Profitability stinks," is how one official put it.

New orders in January rose to a modest $193 million, the highest level in the six months. However, because of an excess of competition, both foreign and domestic, few firms are making much money. Imported forgings (raw forgings and as parts of finished products) are taking a bigger share of the U.S. market.

"The only firms that are doing reasonably well are the larger companies," continued the official. "The smaller firms are still having a hell of a time trying to make some money."

Because companies are having trouble making ends meet, a number of them are up for sale and several people commented that the next few years could see a rash of consolidations and plant closings.

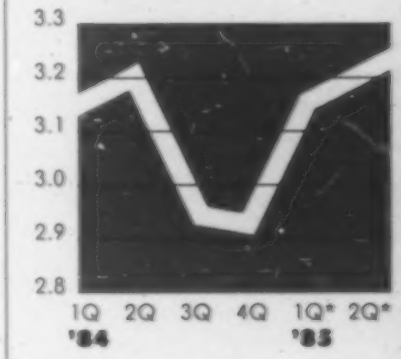
As long as U.S. auto manufacturers remain healthy, the forging industry at least is assured of some business. However, beyond producing forgings for trucks and cars, there is precious little business to be had. Several companies have noted that new military orders are trickling in. These orders reportedly are coming from all three branches of the service.

Most major markets for forgings, off-highway, farm equipment industries, aerospace, and oil field goods industries remain depressed.

The growth of the economy in 1985 has been better than expected for the first quarter and business will get even better in the second. A strong economy should mean improved sales of forgings in the second quarter. However, more than just a general economic pickup is needed to inject some real life into the forging industry.

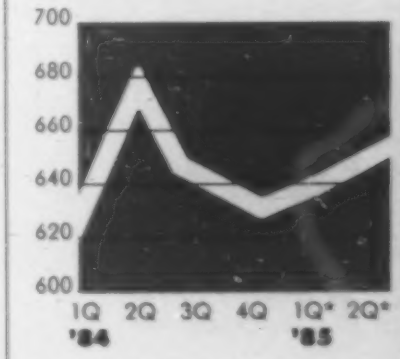
The second quarter should be the strongest quarter for castings, but the expected gain is only 2 pct, for the year!

Ferrous Castings Shipments
In Millions of Tons



Source: U.S. Department of Commerce
*IA estimate

Impression Die Forgings Shipments
In Billions of Dollars

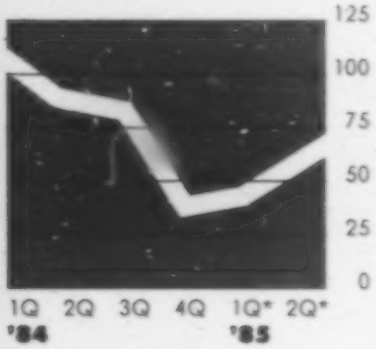


Source: U.S. Department of Commerce
*IA estimate

AIRCRAFT; ENGINES & TURBINES

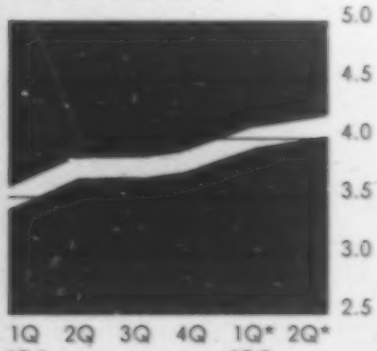
Orders for new aircraft took off slowly in 1984 and are continuing their climb into the second quarter of 1985.

Commercial Airplane Orders
No. of Planes



Source: Airbus Industrie, Boeing and McDonnell-Douglas
*IA estimate

Engines and Turbines Shipments
In Billions of Dollars



Source: U.S. Department of Commerce
*IA estimate

AIRCRAFT—The aircraft industry appears to be on a firm footing after several quarters of uncertainty. Airline traffic has grown steadily as a result of last year's U.S. economic recovery. Along with a more stable fare structure, reduced fuel prices and lessening labor costs for many major domestic airlines, profitability is being restored.

In the second quarter, it is expected that there will be continued price pressure on the major airframe manufacturers, as well as the continuation of complex financing arrangements and the acceptance of older, used aircraft as trade-ins.

However, most officials believe the upward trend evident throughout last year and into the beginning of 1985 will continue into the second quarter. Many small orders for new aircraft are being received.

Expectations are that the world airline industry will earn some $800 million this year, which could set the stage for major purchases for replacement aircraft.

Indications are that at least three major aircraft deals with foreign airlines are in the works, which could lead to near-term orders of at least 50 new airplanes. It is unclear, however, when the actual firm orders will be placed. Although it appears aircraft sales in the first half of 1985 will run slightly below the same period last year, the finalization of these anticipated new orders could provide a major boost to the industry later this year.

Officials are optimistic that many airlines need advanced technology airplanes to meet traffic growth requirements and as replacements. Such a level of optimism has not been voiced for several years. However, with airline profitability returning and fuel prices stabilized or dropping, such positive expectations appear well-founded.

ENGINES & TURBINES—The strong, sustained economic recovery is beginning to exert its influence in this broad industry as some segments begin to show stronger improvement in the second quarter.

The trend has been toward a gradual but constant improvement in the industry as a whole for several quarters. This trend may accelerate slightly in the second quarter. The automotive segment is gaining strength. Further improvement also has been noted in the construction area, thanks to sliding interest rates and the general feeling that the recovery will be sustained.

With interest rates likely to remain low for most of the second quarter, both of these industry segments should benefit,

The diesel engine segment also has shown indications of a revival, with industry officials voicing optimism if the recovery in the economy as a whole stays on track.

But the performance in this industry has remained mixed because of a number of negative factors that seem unlikely to turn around in the short term. Expensive purchases of power plants and large diesels has been forestalled and likely will stay depressed in the second quarter as many companies hold back expensive capital improvement purchases. Uncertainty about oil prices has caused the oil segment to remain sluggish.

There still is an overcapacity of electrical power in the consumer market that has caused a long-standing backlog in the utility area. The domestic nuclear energy industry remains troubled.

Most industry officials hail the recovery. While it has pulled up limited segments of this industry, its impact has yet to be felt in the longer range, more expensive segments of the engine and turbine trade.

WELDING; HEAT TREATMENT

After a strong fourth quarter, welding continues upbeat for the second quarter, about 10 pct better than a year ago.

WELDING—Despite the [illegible] that some of welding's favorite markets have either dried up or gone overseas, the metals joining industry is doing very well. The first quarter of 1985 has been a slight improvement over a strong fourth quarter of 1984 as well as a healthy 10 pct jump over the first quarter of 1984. The second quarter appears to be better still.

According to distributor sales data available from the National Welding Supply Association, Philadelphia, January 1985 was the second best month in the more than five years that the organization has been reporting data. The January index was 193.9. Only October 1984, with an index of 196.6, was higher.

Picking up the slack created by markets gone bad or gone overseas is automotive. This is where mechanized welding has gotten a real push. As noted in the last welding forecast, mechanized welding has finally passed manual welding in use.

The welding industry is also beginning to feel the effect of the huge national bridge-building effort. Processes likely to benefit from this new thrust are flux-cored and submerged-arc welding. Also, the "vertical-up" methods like electroslag and electrogas welding are expected to gain some footholds as well.

Other healthy application areas for welding include Navy ship construction and various other defense areas. The bridge and Navy areas should be strong throughout the balance of the year. Automotive, of course, is something else. It could weaken, depending on the future of imports.

The sale of robots is beginning to improve, but it is still no match for the welding robot activity in Japan or even in West Germany, for that matter. Dedicated automation is showing greater signs of growth.

HEAT TREATING—In what one industrial heating equipment manufacturer called "A nervous market," industrial heat treaters and suppliers of industrial furnace equipment appear to be outperforming many of the markets they supply.

Iron Age expected industrial heating equipment to advance another 6 pct over fourth quarter 1984 during first quarter 1985, and to follow that performance with another moderate gain of 6 pct in second quarter 1985 over first quarter.

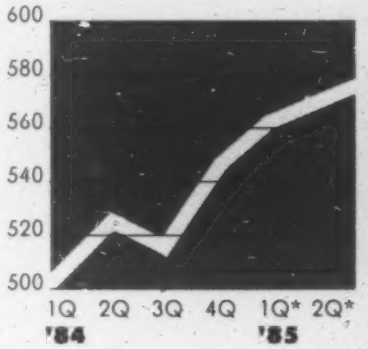
Heat treaters themselves, the industrial service group that supply commercial heat treating services to a wide range of customer industries, should do even better. They appear to be running up about 14 pct, in first quarter over their good gains in the closing quarter of 1984. In second quarter, industry sources believe they can still come up another 6 pct over their first quarter gains.

This means that heat treaters are running about 14 pct over last year, when their industry scored a remarkable recovery from the lows it hit in 1983. Some knowledgeable industry sources call the 14 pct gain "a little optimistic."

Industrial heating equipment customers were slow to break orders loose, and even faltered badly in third quarter of 1984. But when they came back into the market they began pressing suppliers with very short delivery times. This has put pressure on heating equipment producers who find that their own materials and components suppliers are in a short inventory situation and find it difficult to meet very fast delivery requirements.

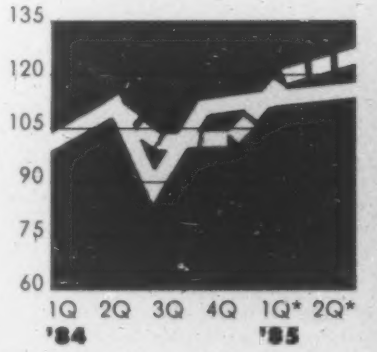
Despite this, one source points out, there does not seem to be an increase in buying equipment manufactured off-shore to reflect the delivery pressure among domestic customers.

Welding Shipments



Index: 100 = $200 million in distributor sales
Source: National Welding Supply Assn.
*IA estimate

Heat Treatment
In Millions of Dollars

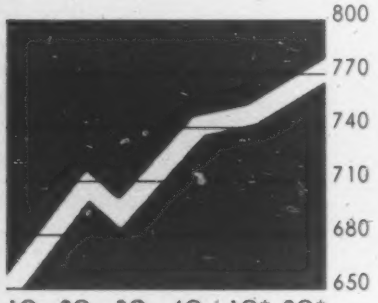


Source: Industrial Heating Equipment Assn., Metal Treating Institute
*IA estimate

FASTENERS; GEARS

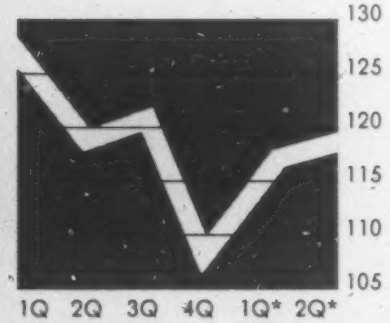
Market by market, the (fastener) industry's hopes for the rest of 1985 vary.

Fasteners, Sales
In Millions of Dollars



Source: Industrial Fasteners Institute
*IA estimate

Gears Bookings



Based on average monthly bookings, 1977 = 100
Source: American Gear Manufacturers Assn.
*IA estimate

FASTENERS—The first quarter of 1985 was another disaster for those remaining "standards" producers in the domestic mechanical fastener industry. Imports are claiming "overwhelming market share" in standard nuts and bolts, said one analyst of the industry.

Numbers about 1984 were bad enough, he added. For example, 1984's figures for imports were 52 pct higher than 1983. The total for 1984 nudged near 1.5 billion lbs valued at around $850 million in sales lost to domestic producers. According to industry sources, that trend has not abated and is threatening to wash out what's left of U.S. standard nut and bolt companies.

The other end of the fastener industry, the "specials" producers, however, reported a remarkably good first quarter and expect the second quarter of 1985, and the year to be better than any since the late 1970's. The second quarter could show an increase in sales of "at least 15 pct over the first quarter and up perhaps 30 pct or more over the second quarter of 1984," predicted one industry leader.

Market by market, the industry's hopes for the rest of 1985 vary.

"After the Japanese are through with the American car makers, I wonder where we'll set up shop. Almost all our product goes to auto companies and if they really do go overseas, I guess we'll just close," said one company executive.

Others who depend on the auto industry agree that the Reagan Administration's decision does not bode well for fastener makers.

The aerospace market, on the other hand, still looks strong for fastener makers as does the appliance industry. "Appliances are much more replaceable these days due to new technologies," said one fastener maker.

GEARS—Some gear industry executives see 4 to 5 pct greater output in their industry in the second quarter, but more-optimistic members see orders up 8 pct, spurred by "a lot of activity in the military."

The last quarter of 1984 was a major disappointment. The American Gear Manufacturers Assn. showed bookings at $71.1 million in November compared to $83.9 million a month earlier, and they slid further in December—to $70.9 million. Now, gearmakers think product sales in almost every category are rebounding.

Order backlogs are improving. One Midwestern supplier said his position is not only improved over last year, but he is looking for his second-quarter backlog to rise as much as 20 pct compared with the second quarter of 1984.

Another noted that the only weak link is fine pitch gears.

The market for gears is mixed. "The auto and paper industries are keeping us going," said one gearmaker. His markets in primary metals, mining and cement are still in the doldrums, he added.

But another Midwestern gear executive told *Iron Age* that, in addition to some big orders from bridge builders and transportation equipment manufacturers, he is expecting 20 to 25 pct more business from the cement industry this quarter.

The gear industry also seems to benefiting from a pickup in the spare parts business.

Nobody was upbeat about farm equipment firms, which may be in the cellar for two years or more.

Meanwhile, gearmakers are still plagued by the strength of the dollar and its effects on imports.

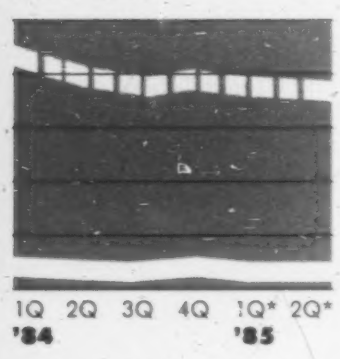
And yet one official noted he's seeing more quotations for gears for export to sugar mills.

And that's a mystery in his book.

SHIPBUILDING; RAILCARS

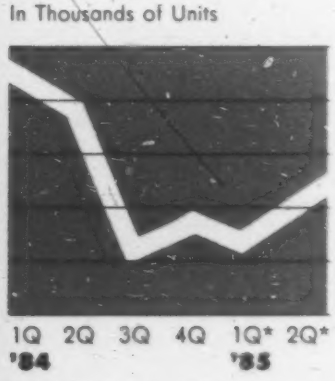
The commercial figure is expected to hold up through the second quarter, while the Navy activity will drop.

Shipbuilding
No. of vessels



Source: Shipbuilders Council of America
*IA estimate

Rail Car Orders
In Thousands of Units



Source: American Railway Car Institute
*IA estimate

SHIPBUILDING—Thanks to U.S. Navy construction, the shipbuilding industry is in fair shape at the end of the first quarter. There are seven commercial ships and 97 Navy vessels under contract in U.S. yards. The commercial figure is expected to hold up through the second quarter, while the Navy activity will drop to about 94 vessels.

Is the offshore rig construction market showing any signs of life? Barely. The world market is showing more life with 50 rigs under construction. That is up from an all-time low of 34 rigs several months ago. In the U.S., however, shipyards are only building three rigs and it does not look as if this level of activity will improve through the balance of the year.

Commercial shipbuilding will get through this year with at least five ships under contract, but perhaps no more. The core of the commercial shipbuilding program are two large crude oil carriers and three container ships. In addition, it has been reported that five companies are developing plans to enter the expanding cruise ship market.

The Navy situation is another matter. A contract is still to be let for one final Trident submarine. Here we are talking about a $1.7 billion contract, the Navy's biggest. Twelve other Navy ships are in the same kind of situation.

Looking further down the pike, there is a possibility that contracts will be let for 23 new Navy vessels during the fourth quarter, but that is no certainty.

Tonnage-wise, shipbuilding is off six vessels from the fourth quarter of 1984 and down 12 vessels from the first quarter of last year. Activity will be off by another three ships in the second quarter. However, Navy appropriations are up $2 billion from last year's $11 billion figure.

RAIL CARS—Orders for new rail cars are off to a bad start in 1985. But there is still hope that this year will eclipse the so-so 12,400-car order year of 1984.

According to *IA* estimates, the industry is off by about 14 pct from the fourth quarter of 1984 and by more than 50 pct from last year's first quarter. The industry, however, is expected to recoup this apparent loss before the year is out.

The big problem in rail cars is that a huge surplus of 143,000 cars is sitting around idle. With that kind of backlog, who needs any new rail cars? The demand is there for specialized tank cars, most of which will be leased. But that's about the extent of the activity. Even the railroads themselves are hardly buying anything. "They only bought 1,100 cars during 1984," one industry observer noted.

There is nothing new happening to increase the demand for coal cars, the number one type of rail car. Besides, there are 43,000 coal cars among the surplus.

The dismal first quarter should be followed by a reasonably decent second quarter. Some optimistic prognosticators are counting on a 25,000 rail car year in 1985. Others say it will be slightly worse than 1984. From the early evidence, it would appear that the pessimists are more on target at this point in time.

The lease market, according to one observer, has been the only component holding the industry together since the booming years of 1981 and before when annual orders ran between 75,000 and 100,000 cars. "But now even the lease market is showing signs of drying up," he said.

According to the U.S. Department of Commerce, the rail car fabricating industry is currently operating at less than 20 pct of capacity.

PRICE & PRODUCTION DATA

(Effective March 11,1985)

Steel production by districts, thousands of tons (000 omitted)

	Last Week	Two Weeks Ago	Month Ago	Year Ago
Northeast Coast	195	192	163	232
Pittsburgh	246	206	198	294
Youngstown	118	110	101	122
Lake Erie	168	159	151	129
Detroit	143	144	134	162
Chicago	471	442	456	580
Cincinnati	104	98	87	105
St. Louis	73	78	71	82
Southern	219	203	173	232
Western	102	95	85	83
U.S. Production	1,839	1,727	1,619	2,032

Source: American Iron & Steel Institute

Lake Superior Ore Prices

51.50% Fe Natural delivered lower Lake ports. Rail transportation, handling and unloading may be charged to the account of the buyer. Coarse ore 80¢ premium.

Pellets (per iron unit natural ..... gross-ton 80.50-86.9*
Mesabi, regular-unscreened ..... gross-ton $32.53
Mesabi, non-bessemer ..... gross-ton $30.03-31.53**

*80.50¢—Pickands Mather as of 1/27/81.
86.9¢—U.S. Steel as of 3/15/82. Cleveland-Cliffs as of 2/26/82. Oglebay Norton as of 3/25/82, and Hanna Mining as of 2/26/82.
**Effective 8/1/83.

STEEL PRODUCTION, COMPOSITE PRICES

(Effective March 11,1985)

U.S. Steel Production	Last Week	Two Weeks Ago	To Date 1985	To Date 1984
Net tons, in thousands	1,839	1,727	16,011	18,316
Capability Utilization Rate	71.0	66.7	63.7	72.2

Composite Prices	This Week	Week Ago	Month Ago	Year Ago
Finished Steel Base* (¢/lb.—eff. 7/1/84)	27.582	27.582	27.582	26.939
Pig Iron** (Net ton = 2000 lbs.)	$213.00	$213.00	$213.00	$213.00
Scrap No. 1 hvy.*** (Gross ton = 2240 lbs.)	$ 86.83	$ 86.50	$ 82.50	$ 91.50
No. 2 bundles	$ 57.50	$ 57.50	$ 54.83	$ 62.83

Scrap Comparison (Gross Ton)

No. 1 steel, Pittsburgh	$ 92.50	$ 92.50	$ 86.50	$100.50
No. 1 steel, Philadelphia	82.50	81.50	80.50	86.50
No. 1 steel, Chicago	85.50	85.50	80.50	87.50
No. 1 bundles, Detroit	87.50	87.50	75.50	95.50
Low Phos., Youngstown	72.50	72.50	72.50	99.50
No. 1 mach'y cast., Pgh	71.50	71.50	71.50	79.50
No. 1 mach'y cast., Phila	98.50	98.50	98.50	100.50
No. 1 mach'y cast., Chi	111.50	111.50	111.50	111.50

*Finished Steel Composite: Weighted index of steel bars, shapes, plates, wire, rails, black pipe, hot and cold rolled sheets and strips.
**Pig Iron Composite: Based on average prices for basic and foundry pig iron at representative producing points within the U.S.
***Steel Scrap Composite: Average of No. 1 hvy. melting steel scrap and No. 2 bundles delivered to consumers at Pittsburgh, Philadelphia and Chicago.

NONFERROUS PRICES

(Effective March 11,1985) Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless otherwise stated.

Primary Metal Prices

(cents per lb.)	current price	last price	date of change
Aluminum (LME)	49.67	49.20	3/11/85
Copper (C)	64.00-65.00	63.50-65.00	3/ 4/85
Lead	17.00-21.00	18.00-21.00	3/ 6/85
Magnesium Ingot	148.00	143.00	5/25/84
Nickel (LME)	232.65	230.58	3/11/85
Titanium Sponge	555.00-585.00	555.00	4/29/82
Zinc	45.00	43.00-45.00	2/25/85

ALUMINUM: Avg. for last week & previous week. COPPER (C) = cathode. LEAD: common grade. MAGNESIUM: 99.8% pig, delivered. NICKEL: Avg. for last week & previous week. Canada. ZINC: high grade.

Antimony, American Laredo, Texas	$2.00
Beryllium-aluminum 5% Be, per lb. contained Be	$230.00
Beryllium-copper, per lb. cont. Be	$144.00
Beryllium 97% powder 200	$178.00
Cadmium, ton lots	$1.25-1.55
Calcium, ton lots, crown	$3.76
Chromium, 99.8%	$3.75
Cobalt, 99%, cathode	$12.50
Gold per troy oz.	$291.00
Indium, dollars per troy oz.	$2.80-3.10
Iridium, dollars per troy oz.	$475.00
Magnesium sticks, 10,000 lbs.	$2.02
Mercury, per 76-lb. f.o.b. N.Y.	$310.00-319.00
Molybdenum, lb. tech. moly oxides, 20 lb. MO can	$6.85
Nickel electro (PDCR)	$3.29
Palladium, per troy oz.	$113.00
Platinum, per troy oz.	$253.00
Rhodium, per troy oz.	$1,150.00
Silver ingots, per troy oz.	$5.66
Vanadium	$6.00
Zirconium sponge	$12.00-17.00

(Per lb. unless otherwise noted)

Straits Tin Price

(U.S. cents per lb. EX-SMELTER, based on daily market in Penang in Malaysian dollars per kilo.)

March 4—509.99
March 5—509.19
March 6—508.80
March 7—508.40
March 8—508.80

Scrap Prices
Brass Mill Scrap

(Cents per lb; over 20,000 lbs. add 1¢ per lb)

	Solids	Turnings
Copper	61½	52¼
Yellow brass	55	50½
Red brass	57⅜	51
Comm. bronze	58⅜	51¾
Mang. bronze	57⅛	47
Free cutting rod ends	51	50

Custom Smelters Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	55
No. 2 copper wire	46
Light copper	37

Ingot Makers Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	51
No. 2 copper wire	42
Light copper	33
No. 1 composition	47
No. 1 comp. turnings	44
Hvy. yellow brass solids	34
Hvy. yellow brass turnings	32
Radiators	37

Aluminum

New mixed clips	36	— 37
Old sheet	34	— 35
Old cast	34	— 35
Clean dry borings	34	— 35

Dealers' Scrap

(Dealers' buying price f.o.b. New York in cents per pound)

Aluminum

Segregated clippings	29	— 30
Mixed L.C. clips	27	— 28
Old sheets and cast	24	— 26
Borings and turnings	22	— 23
Duraluminum clippings	25	— 26

Copper and Brass

No. 1 copper wire	45	— 46
No. 2 copper wire	37	— 38
Light copper	32	— 33
Radiators	32	— 33
No. 1 composition	40	— 41
No. 1 composition turnings	37	— 38
Cocks and faucets	30	— 32
Clean heavy yellow brass	28	— 29
Brass Pipe	28	— 29
New soft brass clippings	41	— 42

Lead

Heavy soft lead	9	— 10
Whole batteries	1	— 3
Type metal	16	— 17
Electrotype	13	— 14

Nickel

Nickel solids	120	—130
Nickel rod ends	120	—130
Nickel sheets, clips	120	—130
Nickel turnings	40	— 45

Zinc

New zinc clippings	18	— 19
Old diecast zinc	14	— 15

EFFECTIVE MARCH 11,1985

(Effective March 11,1985) Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless otherwise stated. Prices are the opinions of *Iron Age* editors and correspondents, based on contacts with dealers, brokers, generators and users in the industry on the effective date listed above.

Ferrous Scrap Prices

Pittsburgh

No. 1 hvy. melting	$ 92.00 to	$ 93.00
No. 2 hvy. melting	82.00 to	83.00
No. 1 dealer bundles	107.00 to	108.00
No. 1 factory bundles (auto)	111.00 to	112.00
No. 2 bundles	56.00 to	57.00
No. 1 busheling	109.00 to	110.00
Machine shop turnings	10.00 to	11.00
Shoveling turnings	51.00 to	52.00
Cast iron borings	49.00 to	50.00
Low phos. punchings plate	111.00 to	112.00
Heavy turnings	82.00 to	83.00
No. 1 RR hvy. melting	97.00 to	98.00
Rails, 2 ft. and under	113.00 to	114.00
Scrap rails, random lgth	100.00 to	101.00
RR specialties	107.00 to	108.00
No. 1 machinery cast	71.00 to	72.00
Cupola cast	64.00 to	65.00
Heavy breakable cast	30.00 to	31.00
Stainless		
18-8 bundles and solids	610.00 to	615.00
18-8 turnings	510.00 to	515.00

Chicago

No. 1 hvy. melting	$ 85.00 to	$ 86.00
No. 2 hvy. melting	81.00 to	82.00
No. 1 dealer bundles	102.00 to	103.00
No. 1 factory bundles (auto)	104.00 to	105.00
No. 2 dealer bundles	64.00 to	65.00
No. 1 busheling	100.00 to	101.00
Shredder scrap	99.00 to	100.00
Machine shop turnings	51.00 to	52.00
Mixed borings and turnings	52.00 to	53.00
Shoveling turnings	53.00 to	54.00
Cast iron borings	50.00 to	51.00
Low phos. forge crop	118.00 to	119.00
Low phos. punchings plate 1/4 in. and heavier	132.00 to	133.00
Low phos. 2 ft. and under	126.00 to	127.00
No. 1 RR hvy. melting	95.00 to	96.00
Scrap rails random lgth	95.00 to	96.00
Reroller rails	109.00 to	110.00
Rails, 2 ft. and under	120.00 to	121.00
RR couplers and knuckles	104.00 to	105.00
RR car axles	126.00 to	127.00
No. 1 machinery cast	111.00 to	112.00
Cupola cast	102.00 to	103.00
Stove plate	99.00 to	100.00
Steel car wheels	109.00 to	110.00
Stainless		
18-8 bundles and solids	550.00 to	560.00
18-8 turnings	470.00 to	480.00
430 bundles and solids	135.00 to	140.00
430 turnings	105.00 to	110.00

Philadelphia

No. 1 hvy. melting	$ 81.00 to	$ 84.00
No. 2 hvy. melting	71.00 to	74.00
No. 1 dealer bundles	94.00 to	97.00
No. 2 dealer bundles	50.00 to	53.00
No. 1 busheling	92.00 to	95.00
Shredder scrap	100.00 to	103.00
Machine shop turnings	26.00 to	29.00
Mixed borings and turnings	26.00 to	29.00
Shoveling turnings	40.00 to	43.00
Low phos. 5 ft. and under	92.00 to	95.00
Low phos. 2 ft. punchings	110.00 to	113.00
Electric furnace bundles	113.00 to	116.00
RR specialties	92.00 to	95.00
Rails, 2 ft. and under	112.00 to	115.00
Cupola cast	82.00 to	85.00
Heavy breakable cast	57.00 to	60.00
No. 1 machinery cast	97.00 to	100.00

Detroit

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 64.00 to	$ 65.00
No. 2 hvy. melting	63.00 to	64.00
No. 1 dealer bundles	87.00 to	88.00
No. 2 bundles	39.00 to	40.00
No. 1 busheling	86.00 to	87.00
Drop forge flashings	55.00 to	56.00
Machine shop turnings	54.00 to	55.00
Mixed borings and turnings	28.00 to	29.00
Shoveling turnings	55.00 to	56.00
Cast iron borings	34.00 to	35.00
Heavy breakable cast	42.00 to	43.00
Mixed cupola cast	58.00 to	59.00
Automobile cast	82.00 to	83.00
Stainless		
18-8 bundles and solids	475.00 to	485.00
18-8 turnings	380.00 to	390.00
430 bundles and solids	115.00 to	125.00

Youngstown

No. 1 hvy. melting	$ 69.00 to	$ 72.00
No. 2 hvy. melting	62.00 to	65.00
No. 1 dealer bundles	81.00 to	84.00
No. 2 dealer bundles	35.00 to	38.00
Machine shop turnings	11.00 to	14.00
Shoveling turnings	16.00 to	19.00
Low phos. plate	71.00 to	74.00
Electric furnace bundles	69.00 to	72.00
Galvanized bundles	59.00 to	62.00

Cleveland

No. 1 hvy. melting	$ 70.00 to	$ 73.00
No. 2 hvy. melting	42.00 to	45.00
No. 1 dealer bundles	84.00 to	87.00
No. 1 factory bundles	92.00 to	95.00
No. 2 bundles	35.00 to	38.00
No. 1 busheling	87.00 to	90.00
Machine shop turnings	12.00 to	15.00
Mixed borings and turnings	6.00 to	9.00
Shoveling turnings	13.00 to	6.00
Cast iron borings	14.00 to	17.00
Cut structural & plates, 2 ft. and under	118.00 to	121.00
Low phos. punchings plate	118.00 to	121.00
Drop forge flashings	50.00 to	53.00
Foundry steel, 2 ft. & under	74.00 to	77.00
No. 1 RR hvy. melting	84.00 to	87.00
Rails, 2 ft. and under	117.00 to	120.00
Rails, 18 in. and under	119.00 to	122.00
Steel axle turnings	64.00 to	67.00
Railroad cast	95.00 to	98.00
No. 1 machinery cast	105.00 to	108.00
Cupola cast	61.00 to	64.00
Stove plate	60.00 to	63.00
Stainless		
18-8 bundles	375.00 to	385.00
18-8 turnings	325.00 to	335.00
430 bundles	80.00 to	85.00

Buffalo

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 69.00 to	$ 70.00
No. 2 hvy. melting	57.00 to	58.00
No. 1 busheling	84.00 to	85.00
No. 1 dealer bundles	83.00 to	84.00
No. 2 bundles	43.00 to	44.00
Machine shop turnings	17.00 to	18.00
Mixed boring and turnings	18.00 to	19.00
Shoveling turnings	31.00 to	32.00
Cast iron borings	28.00 to	29.00
Low phos. plate	97.00 to	98.00
Structural and plate, 2 ft. and under	100.00 to	101.00
Rails, 2 ft. and under	100.00 to	101.00
Scrap rails, random lgth	74.00 to	75.00
No. 1 machinery cast	80.00 to	81.00
No. 1 cupola cast	60.00 to	61.00

St. Louis

No. 1 hvy. melting	$ 69.00 to	$ 70.00
No. 2 hvy. melting	56.00 to	57.00
Foundry steel, 2 ft.	64.00 to	65.00
No. 1 dealer bundles	69.00 to	70.00
No. 2 bundles	51.00 to	52.00
Machine shop turnings	19.00 to	20.00
Shoveling turnings	25.00 to	26.00
Cast iron borings	29.00 to	30.00
No. 1 RR hvy. melting	69.00 to	70.00
Rails, random length	68.00 to	69.00
Rails, 18 in. and under	84.00 to	85.00
RR specialties	83.00 to	84.00
Cupola cast	76.00 to	77.00
Heavy breakable cast	54.00 to	55.00
Stove plate	91.00 to	92.00
Steel car wheels	100.00 to	101.00
Rerolling rails	80.00 to	81.00
Unstripped motor blocks	63.00 to	64.00

Birmingham

No. 1 hvy. melting	$ 73.00 to	$ 74.00
No. 2 hvy. melting	69.00 to	70.00
No. 1 dealer bundles	77.00 to	78.00
No. 2 bundles	50.00 to	51.00
No. 1 busheling	77.00 to	78.00
Shredder scrap	99.00 to	100.00
Machine shop turnings	29.00 to	30.00
Shoveling turnings	42.00 to	43.00
Cast iron borings	39.00 to	40.00
Electric furnace bundles	74.00 to	75.00
Elec. furnace, 3 ft. & under	74.00 to	75.00
Structural and plate, 2 ft.	100.00 to	101.00
Structural and plate, 4 ft.	92.00 to	93.00
No. 1 RR hvy. melting	92.00 to	93.00
Scrap rails, random lgth	90.00 to	91.00
Rails, 2 ft. and under	105.00 to	106.00
Angles and splice bars	92.00 to	93.00
No. 1 cupola cast	87.00 to	88.00
Unstripped motor blocks	75.00 to	76.00

Cincinnati

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 56.00 to	$ 57.00
No. 2 hvy. melting	54.00 to	55.00
No. 1 dealer bundles	68.00 to	69.00
No. 2 bundles	28.00 to	29.00
Machine shop turnings	7.00 to	8.00
Shoveling turnings	9.00 to	10.00
Cast iron borings	21.00 to	22.00
Low phos. 18 in. and under	87.00 to	88.00
Rails, random length	65.00 to	69.00
Rails, 2 ft. and under	81.00 to	82.00
No. 1 cupola cast	61.00 to	62.00
Heavy breakable cast	26.00 to	27.00
Drop broken cast	77.00 to	78.00

New York

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 47.00 to	$ 48.00
No. 2 hvy. melting	38.00 to	39.00
No. 2 dealer-bundles	23.00 to	27.00
Mixed borings and turnings	11.00 to	13.00
Machine shop turnings	6.00 to	7.00
Shoveling turnings	14.00 to	15.00
Clean cast, chem. borings	35.00 to	36.00
No. 1 machinery cast	89.00 to	90.00
Mixed yard cast	50.00 to	51.00
Heavy breakable cast	10.00 to	12.00
Stainless		
18-8 prepared solids	505.00 to	525.00
18-8 turnings	405.00 to	425.00
430 prepared solids	90.00 to	110.00
410 solids	80.00 to	90.00

Boston

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 58.00 to	$ 60.00
No. 2 hvy. melting	48.00 to	50.00
No. 1 dealer bundles	61.00 to	63.00
No. 2 bundles	35.00 to	37.00
No. 1 busheling	70.00 to	72.00
Shredder scrap	67.00 to	69.00
Machine shop turnings	10.00 to	12.00
Shoveling turnings	18.00 to	20.00
No. 1 machinery cast	81.00 to	86.00
Mixed cupola cast	48.00 to	50.00
Heavy breakable cast	8.00 to	10.00

San Francisco

No. 1 hvy. melting	$ 44.00 to	$ 46.00
No. 2 hvy. melting	38.00 to	40.00
No. 1 dealer bundles	35.00 to	37.00
No. 2 dealer bundles	20.00 to	22.00
Machine shop turnings	8.00 to	9.00
Cast iron borings	8.00 to	9.00
No. 1 cupola cast	81.00 to	83.00

Los Angeles

No. 1 hvy. melting	$ 47.00 to	$ 49.00
No. 2 hvy. melting	40.00 to	42.00
No. 1 dealer bundles	38.00 to	40.00
No. 2 dealer bundles	20.00 to	22.00
Machine shop turnings	13.00 to	14.00
Shoveling turnings	10.00 to	11.00
Cast iron borings	8.00 to	9.00
Elec. furnace, 1 ft. and under (foundry)	74.00 to	76.00
No. 1 cupola cast	75.00 to	77.00

Seattle

No. 1 hvy. melting	66.00 to	68.00
No. 2 hvy. melting	57.00 to	59.00
No. 2 bundles	40.00 to	42.00
No. 1 cupola cast	92.00 to	93.00
Mixed yard cast	82.00 to	84.00

Hamilton, Ont.

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 86.00
No. 2 hvy. melting, cut 2 ft. and under	78.00
No. 1 dealer bundles	84.00
No. 2 bundles	60.00
Mixed steel scrap	60.00
Bush. new fact. prep'd	86.00
Bush. new fact. unprp'd	75.00
Machine shop turnings	33.00
Short steel turnings	35.00
Mixed borings and turnings	25.00
Cast scrap	95.00

Houston

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 78.00 to	$ 79.00
No. 2 hvy. melting	64.00 to	65.00
No. 2 bundles	49.00 to	50.00
Machine shop turnings	17.00 to	18.00
Crushed turnings	34.00 to	35.00
Shredder scrap	86.00 to	87.00
Cut structural plate, 2 ft. and under	105.00 to	106.00
Cut structural plate, 5 ft. and under	89.00 to	90.00
Unstripped motor blocks	60.00 to	61.00
Cupola cast	87.00 to	88.00

PRODUCER KEY
With Principal Offices

A7 Armco Inc., Middletown, Ohio
A8 Atlantic Steel Co., Atlanta, Ga.
A11 Atlantic Wire Co., Branford, Conn.

B1 Baron Drawn Steel Corp., Toledo, Ohio
B3 Bethlehem Steel Corp., Bethlehem, Pa.
B4 Blair Strip Steel Co., New Castle, Pa.
B5 Bliss & Laughlin Steel Co., Harvey, Ill.

C6 CF&I Steel Corp., Pueblo, Colo.
C10 Copperweld Steel Co., Warren, Ohio
C16 Connors Steel Co., Birmingham, Ala.
C20 Calumet Steel Div., Chicago Heights, Ill.

D1 Detroit Strip Div., Cyclops Corp.

E4 Elliot Bros. Steel Co., New Castle, Pa.

F1 Firth Sterling, Inc., McKeesport, Pa.

G2 Granite City Steel Div., National Steel Corp., Granite City, Ill.
G3 Great Lakes Steel Div., National Steel Corp., Ecorse, Mich.
G4 Greer Steel Co., Dover, Ohio
G5 Green River Steel Corp., Owensboro, Ky.
G6 Gibraltar Steel Corp., Buffalo, N. Y.
G7 Georgetown Steel Corp., Georgetown, S.C.

H1 Hercules Drawn Steel Corp., Livonia, Mich.

I2 Ingersoll Steel Div., Newcastle, Ind.
I3 Inland Steel Co., Chicago
I4 Interlake Steel Corp., Chicago

J2 Jessop Steel Corp., Washington, Pa.
J3 Jones & Laughlin Steel Corp., Pittsburgh
J4 Joslyn Mfg. & Supply Co., Chicago
J5 Judson Steel Corp., Emeryville, Calif.

K2 Keystone Consolidated Industries, Inc.
K3 Kentucky Electric Steel Co., Ashland, Ky.
K5 Kemco Div., Foote Mineral Co., Keokuk, Ia.

L2 La Salle Steel Co., Chicago
L3 Lone Star Steel Co., Dallas
L4 Lukens, Inc., Coatesville, Pa.

M2 McLouth Steel Products Corp., Detroit
M8 Mill Strip Products Div., National Steel Service Center, National Steel Corp.
M9 Moltrup Steel Products Co., Beaver Falls, Pa.
M11 Midwest Steel Div., National Steel Corp., Portage, Ind.

N1 Northeast Precision Steel Co., Boston
N4 Northwestern Steel & Wire Co., Sterling, Ill.
N6 Northwest Steel Rolling Mills, Seattle
N9 Nelsen Steel & Wire Co., Chicago
N10 North Star Steel Co., Saint Paul, Minn.

O2 Oregon Steel Mills, Portland, Ore.

P2 Phoenix Steel Corp., Claymont, Del.
P15 Philadelphia Steel and Wire Corp., Phila.

R3 Republic Steel Corp., Cleveland
R4 Ramco Steel Co., Buffalo, N. Y.
R5 Roblin Steel Corp., North Tonawanda, N.Y.
R7 Rome Strip Steel Co., Rome, N. Y.

S1 Sharon Steel Corp., Sharon, Pa.
S7 Stanley Works, New Britain, Conn.
S8 Superior Drawn Steel Co., Monaca, Pa.
S10 Seneca Steel Corp., Buffalo, N. Y.
S16 Southern Precision Steel Co., Gulfport, Miss.

T4 Thomas Steel Strip Co., Warren, Ohio
T5 Timken Co., Steel Division, Canton, Ohio
T7 Texas Steel Co., Fort Worth, Tex.
T9 Triumph Electro Corp., Chicago
T10 Tennessee Forging Steel Corp., Harriman, Tenn.
T11 Teledyne Columbia-Summerill, Carnegie, Pa.

U1 United States Steel Corp., Pittsburgh

W3 Weirton Steel Corp., Weirton, W. Va.
W5 Wheeling-Pittsburgh Steel Corp.
W7 Wilson Steel & Wire Co., Chicago
W10 Wyckoff Steel Div., Ampco-Pittsburgh Corp., Pittsburgh
W14 Whittar Steel Strip Div., Whittar Industries, Ltd., Detroit

STEEL SERVICE CENTER PRICES — Price, Dollars per 100 lb

Prices are based on list prices reported to *Iron Age* by a number of metal service centers deemed representative by *Iron Age* and then weighted based in part on the reports received each month. Prices are not intended to reflect the actual transaction prices obtained by any individual metal service center.

Cities* / City Delivery Charge*	Sheets			Strip	Plates	Shapes	Bars		Alloy Bars			
	Hot-Rolled (10 gage)	Cold-Rolled (20 gage)	Galvanized (16 gage)	Hot-Rolled Strip	Plates	Standard Structurals	Hot-Rolled (merchant)	Cold Finished	Hot-Rolled 8620 As Rolled	Hot-Rolled 4140 Annealed	Cold-Drawn 8620 As Rolled	Cold-Drawn 4140 Annealed
Atlanta	26.95	32.83	33.53	31.34	25.79	22.76	19.99	31.88	34.34	50.60	69.58	73.19
Baltimore	26.90	30.72	35.71	36.82	32.66	28.80	22.60	36.40	51.69	56.95	63.60	69.98
Birmingham	25.47	32.35	35.27	31.94	25.40	23.63	21.20	32.24	49.31	58.90	68.10	74.43
Boston	34.94	40.19	45.64	47.54	33.25	30.06	23.88	35.93	41.98	46.00	54.65	58.83
Buffalo	31.10	35.68	41.89	40.15	30.60	26.15	20.15	33.05	41.05	43.95	49.30	56.61
Chicago	28.74	35.76	37.88	29.14	23.53	20.19	18.12	27.92	32.30	41.66	46.98	52.91
Cincinnati	29.70	35.07	37.78	29.88	24.42	20.21	18.50	29.32	34.22	42.79	47.25	52.89
Cleveland	28.48	34.22	37.48	36.74	23.60	23.58	18.89	31.34	38.19	42.83	47.48	54.28
Denver	31.44	38.19	36.22	37.09	27.40	24.56	20.39	39.80	50.55	57.95	65.95	70.19
Detroit	29.44	35.48	38.26	29.03	24.45	20.78	17.85	29.33	34.09	42.46	47.29	53.49
Houston	27.67	28.71	31.69	39.21	26.73	26.27	21.60	40.15	45.96	52.87	58.95	66.14
Kansas City	30.72	36.98	39.70	34.01	27.10	23.68	18.19	34.15	39.60	45.40	49.73	54.87
Los Angeles	27.01	31.33	37.84	34.31	28.39	32.31	26.81	38.05	50.88	57.10	63.15	70.64
Memphis	24.31	32.51	35.34	31.89	26.17	21.51	20.49	34.05	36.78	49.96	59.80	69.44
Milwaukee	29.00	34.67	37.64	31.22	24.52	21.64	18.11	28.10	33.82	42.06	46.47	52.90
New York	32.47	38.99	42.55	43.38	32.66	25.31	21.35	36.35	42.26	46.93	51.84	56.22
Philadelphia	28.10	38.99	41.23	43.50	31.05	27.15	19.28	32.14	42.50	47.75	55.07	60.50
Pittsburgh	35.27	40.97	45.23	43.45	37.60	30.44	21.58	30.44	38.43	44.64	49.90	54.10
Portland	28.96	32.08	38.73	36.93	32.88	34.78	27.16	44.85	49.78	57.74	70.44	.....
San Francisco	26.94	31.55	37.04	34.48	27.78	30.19	26.07	38.70	50.70	57.69	63.90	70.05
Seattle	23.61	30.12	36.65	32.95	22.02	27.32	26.05	39.14	53.03	61.70	69.75	74.63
Spokane	21.21	30.42	35.65	38.02	35.00	33.77	22.26	43.01	43.20	47.52	.....	58.32
St. Louis	29.11	34.60	37.31	34.59	23.89	21.73	18.44	32.28	38.12	43.51	47.85	53.69
St. Paul	28.87	33.61	35.61	38.36	23.81	22.48	17.99	32.18	37.52	42.72	47.09	53.31

Base Quantities. All HR products may be combined for quantity. Hot-rolled sheet, 10 ga x 36 x 96—120; Cold-rolled sheet, 20 ga x 36 x 120; Galv. sheet—16 ga x 36—120; Hot-rolled strip—1/8" x 1"; Plate 1/4" x 84"; Shapes—I-Beams 6 x 12.5; Hot-rolled bar—Rounds 3/4-2-15/16; Cold finished bar—C 1018—1" rounds; Alloy bar—Hot-rolled 8620—1-5/8" round; Cold drawn—1" round; Hot-rolled 4140—1- 5/8" round; Cold drawn—1" round. Check local supplier for additions or deductions from base.

*Prices at all points include metropolitan delivery charges.

Codes identify Producers listed on p. 72. (Prices quoted are mill base prices in cents per pound unless otherwise noted and do not reflect extras or surcharges.)
N.A.=Not available.

Billets, Blooms, Slabs

(Dollars per net ton)

Carbon Rerolling, Midwest	
W5, N4	$366.00
West	
C6	$346.00
Carbon Forging, East	
B3(2), C10, U1	$473.00
R3	$453.00
Midwest	
R3, W5	$453.00
S1, U1, I3	$473.00
C10	$473.00
K2	$473.00
West	
C6	$420.00
Alloy, East	
R3	$492.00
B3, U1, C10	$512.00
Midwest	
W5	$492.00
U1, C10, I3	$512.00
R3	$492.00
S1	$512.00
West	
C6	$469.00

Structurals

Carbon, East	
B3	22.90
J3	23.90
Midwest	
C20	22.90
W8	22.90
I3, T10, N4	23.90
South	
C16	23.90
T10	22.90
High-Strength, Low Alloy, East	
B3	22.90
J3	23.90
Midwest	
N4	23.90
W8	24.15
I3	23.90
South	
C16	23.90
Wide Flange, Carbon, East	
B3	22.90
U1	21.50
J3	23.90
Midwest	
U1	21.50
N4	23.90
I3	23.90
Wide Flange, High Strength-Low Alloy, East	
U1	24.30
Midwest	
U1	24.30

Strip

Hot-Rolled, Carbon, Cut ll Edge—all widths, East	
U1, B3	23.75
J3	22.05
Midwest	
D1	22.05
I4	22.85
J3, W3	22.05
G2, G3	23.45
N4	22.55
W5, S1, A7	23.75
U1, B3, I3	23.75
M2, R3	22.05
South	
R3	22.05
Cold-Rolled, Carbon Max. 25%, East	
E4	29.75
S10	29.60
P15	24.80
B4	36.60
G6	36.175
Midwest	
I4	38.30
W14	32.80
J4	34.05
S1	37.05
High-Strength, Hot-Rolled, Low Alloy, Cut Edge & Mill Edge, All widths, (plus extras)*	
Midwest	
M2, R3, W3, J3	22.05
G2, G3	23.45
S1	23.75
A7	25.35
South	
R3	22.05
High-Strength, Cold-Rolled, Low Alloy, Mill Edge	
Midwest	
S1	37.05
Alloy, Hot-Rolled, Midwest (plus extras)*	
S1	26.10
I4	25.20
Alloy, Cold-Rolled East (plus extras)*	
E4,M8	43.35
B4	49.75
P15	32.10
Midwest	
I4	44.30
S1	44.80

Sheets

Hot-Rolled, Carbon (18 Ga & Hvyr), East	
B3	23.75
J3	22.05
U1	23.75
Midwest	
M2, R3, W3	22.05
D1, J3	22.05
G2, G3	23.45
I4	22.45
U1, W5, S1, B3, I3, A7	23.75
West	
U1	24.25
South	
R3	22.05
Cold-Rolled, East, Class 1	
B3(2)	28.15
J3	26.15
U1	28.15
Midwest	
R3, M2, W3	26.15
G2, G3, M11	27.85
J3	26.15
D1	26.15
U1, W5, S1, B3, I3, A7	28.15
West	
U1	28.65
South	
R3	24.65
Galvanized (hot-dipped), East	
B3(2)	30.30
U1	30.30
Midwest	
J3, D1, W3	28.00
R3, Y1	28.00
G2, M11	30.00
U1, W5, S1, I3, A7	30.30
West	
U1	30.80
South	
R3	28.00
Enameling, Midwest	
U1, S1, I3, A7	29.65
J3	27.65
Long-Terne, Midwest	
W5, A7, U1	31.65
R3	29.35

Wire Rod

East	
B3(2)	22.35
Midwest	
N4, K2	22.35
U1	24.10
A7	22.00
West	
C6	21.45
South	
G7	22.35

Tinplate

Electrolytic Tinplate	
Single Reduced (70 lb)	
East	**per base box**
J3	26.29
U1	28.99
Midwest	
U1	28.99
J3	26.29
M11	27.54
W3	26.29
W5	28.99
West	
U1	29.49
South	
U1	28.99
Double Reduced (55 lb)**	
Midwest	
M11	21.95
J3	21.49
U1	23.38
W3	21.49
W5	23.38
West	
U1	23.88
South	
U1	23.38
Black Plate	
Single Reduced (70 lb)*	
East	
B3	24.81
Midwest	
J3, W3	24.01
I3	24.57
W5	25.55
U1,	26.27
M11	26.27
West	
U1	26.27
Double Reduced (55 lb)	
East	
B3	20.49
Midwest	
W5, M11, U1	20.49
J3	18.93
W3	18.93
West	
U1	20.49
South	
U1	20.49

*75 lb—base weight extra 69¢
**50 lb—base weight extra $1.40

Bars

Carbon Steel, Hot-Rolled (Special quality)	
East	
R3, K3, R5	25.80
J3	25.80
U1, C10, B3(3)	27.05
Midwest	
I4	26.00
U1, I3	27.05
R3, T10	25.80
C20, N4	25.80
K2	25.80
A7	20.25
West	
C6	24.45
South	
A8	20.65
C16	25.80
Cold-Finished Carbon, East	
A11	22.15
R3	33.75
T11, S8	31.00
J3(4), L2	31.00
M8, W10	31.00
N1	24.475
R4, B4	33.25
C10	31.00
Midwest	
W10, R3	33.25
J3	31.00
B1	33.45
L2	30.75
N9	31.00
W14	22.20
B5, M9	34.75
West	
R3	37.15
South	
J3	34.00
C16	24.40
J3	31.95
Alloy, Hot-Rolled, East	
R5, K3	27.95
R3, J3	27.95
U1, B3(2), C10	29.20
Midwest	
R3	27.95
I3, C10, U1	29.20
I4	27.35
A7	20.25
West	
C6	26.60
South	
A8	22.00
Alloy, Cold-Drawn, East	
L2	35.20
R3, N1	37.90
R4	37.10
J3, W10, L2	34.85
T11, S8	34.85
C10	34.85
Midwest	
R3	37.35
J3, W10, C10	34.85
B1	37.30
N9	34.85
L2	34.85
B5, M9	38.60
West	
R3	40.75
South	
J3	35.85
C16	28.00

Plates

Carbon Steel, East	
B3	23.25
L4, U1	25.75
P2	23.25
J3	26.75
Midwest	
B3	23.25
I3	25.75
J3, A7	22.80
U1, I4, S1	25.75
R3	26.75
West	
C6	24.25
U1	25.75
O2	23.00
South	
R3	25.75
U1	25.75
Alloy East	
B3	31.05
U1, L4	33.55
P2	33.55
J3	34.55
Midwest	
B3	31.05
I4, U1	33.55
West	
O2	31.00
South	
U1	33.55

Wire

Carbon Steel Wire, East	
B3	27.10
A11	22.15
Midwest	
R3	24.60
N4, W7	27.40
K2	24.20
South	
A8	22.85
West	
C6	24.95

DURABLE ORDERS START THE YEAR ON AN UPBEAT

Other positive statistics notwithstanding, analysts say economic growth is slowing. To support this they point to the January factory orders rate, which dropped for the seventh time in 10 months.

Overall new orders for manufactured goods—non-durables and durables—dropped 0.8 pct to $192.2 billion compared with $193.9 billion in December. For durable goods manufacturers, however, the news was not that bad. Orders for durable goods—including machinery and major consumer items like household appliances—were up 1.9 pct to $103.9 billion. Non-durable goods orders fell 4 pct in January.

Analysts attributed much of the decline to strong foreign competition that lured orders offshore.

The massive U.S. trade deficit is holding back domestic growth, the Commerce Department conceded. But, the agency spokesman said, the Reagan Administration's forecast of 4 pct growth in the nation's economy this year is achievable.

In large part foreign goods are priced lower because of the rising value of the dollar. The surge in equipment imports, said Robert Ortner, Commerce's chief economist, has been so strong lately that the U.S. $45 billion trade surplus in capital goods registered in 1981 now "has been obliterated."

Increases for durable goods orders came primarily from a 11.9 pct gain in orders for primary metals led by iron and steel castings—up 85.7 pct—and a 13.6 pct jump in orders for nonferrous metals.

Non-defense capital goods orders—a key indicator of business investment plans—declined 15.2 pct in January. Commerce officials said growth this year will be concentrated primarily in high-technology companies, the service category, home building and military goods.

Billions of Dollars, Seasonally adjusted Monthly Total, unless otherwise noted Source: U.S. Dept of Commerce		Latest Month or Qtr.	Previous Month or Qtr.	Same Period Year Ago
CAPITAL EXPENDITURES (Annual Rates)				
U.S. Industry, Total*	4th Qtr.	$321.4	$313.1	$283.9
Manufacturing, Total*	4th Qtr.	139.0	134.5	116.4
Manufacturing, Durable Goods*	4th Qtr.	67.5	65.4	54.9
Mining Industry*	4th Qtr.	12.9	12.6	12.4
KEY INDICATORS, Durable Goods Manufacturing				
New Orders	January	103.9	102.0	100.9
Shipments	January	103.8	103.7	96.5
Inventories	January	191.3	190.8	177.8
Unfilled Orders	January	345.1	345.0	328.6
NEW ORDERS, METALWORKING				
Capital Goods Producers, Nondefense Industries	January	23.1	26.6	25.4
Capital Goods Producers, Defense Industries	January	9.5	8.5	6.6
Primary Metals, Total	January	11.3	10.1	12.7
Steel (SIC 331)	January	5.0	5.0	5.8
Iron & Steel Castings (SIC 332)	January	1.3	0.7	1.5
Nonferrous Metals	January	5.0	4.4	5.4
Nonelectrical Mach.-Equip. Industries, Total	January	14.9	16.4	16.8
Engines & Turbines	January	0.9	1.6	0.9
Farm Machinery & Equipment (Shipments)	January	0.6	0.8	1.0
Construction, Mining & Mat. Hdlg. Equip	January	2.6	2.6	2.6
General Industrial Machinery	January	1.2	1.3	1.2
Fluid Power Equipment** (Index-1972=100)	January	296.0	231.0	296.0
Metalworking Machinery	January	0.9	1.2	0.8
Machine Tools, Total ($Mill., Unadjusted)***	January	211.9	255.2	191.0
Machine Tools, Metalcutting***	January	138.2	159.1	135.1
Machine Tools, Metalforming***	January	73.7	96.1	56.0
Electrical Mach. & Equip. Industries, Total	January	17.5	15.4	15.7
Elec. Transmission Equip. & Ind. Apparatus	January	2.1	2.5	1.8
Household Appliances	January	1.5	1.4	1.6
Communication Equipment	January	7.2	5.8	4.7
Transportation Equip. Industries, Total	January	27.5	27.0	25.9
Motor Vehicles & Parts (Shipments)	January	20.0	17.0	17.0
Aircraft, Missiles & Parts	January	6.6	9.0	6.8
Shipbuilding & Military Tanks	January	1.0	0.5	0.9
Fabricated Metal Products, Total	January	12.9	13.0	10.9
Instruments, Total	January	5.0	5.0	4.7

*Est.—Commerce Dept. **Source: National Fluid Power Assn. ***Source: NMTBA